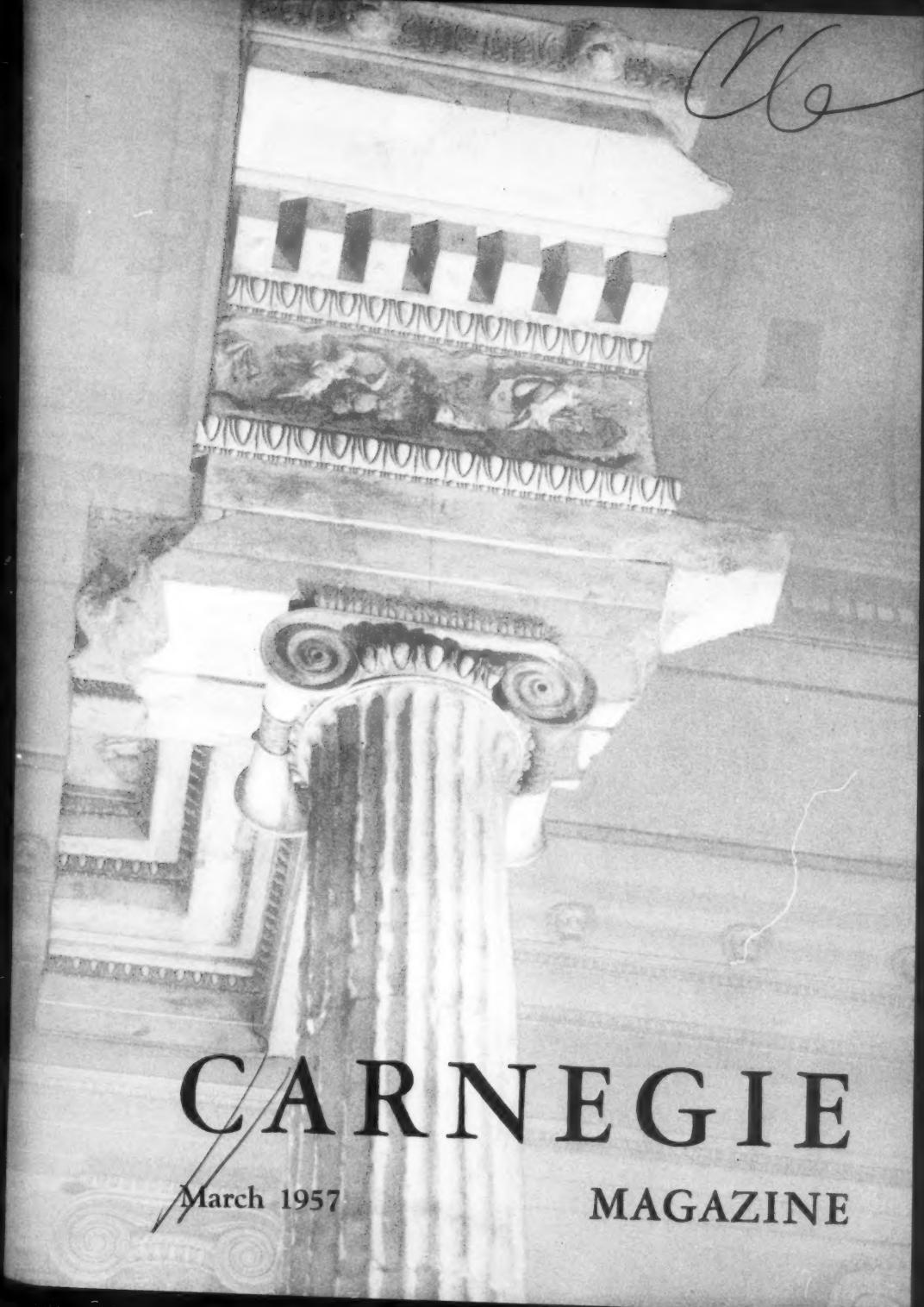


CC



# CARNEGIE

March 1957

MAGAZINE

# AUSTRALIAN ABORIGINE ECONOMY

in the 17th Century

**I**N ITS SIMPLEST TERMS, the 17th century civilization of Australia's aborigines can, at best, be described as a "collecting and hunting" economy. Tribal units wandered in the vast wilderness seeking food.

*Boomerang invented by Australian aborigines for hunting. From the collection of the Carnegie Museum.*

With pointed wooden staffs for digging, women and children gathered seeds, lily roots, stems, yams, berries and fruits. There was no cultivation of the soil. Aborigine men hunted and killed birds and larger animals with crude weapons. There was no system of preserving food and the tribe starved in times of scarcity.

The aborigines never developed a need for money or any basic unit of trade. They wore no clothes, never learned to weave, lived in *leanto's*. Their entire life was simply arranged to fulfill their basic wants, to survive.

When you realize how basic an economy supported the aborigines, you can well see why no advanced monetary system arose in this simple civilization. But, today, the complexity of our lives, our high living standards, our tightly interwoven system of business, depend on our monetary system and modern banking services to serve the financial needs of our society.

---

**MELLON NATIONAL BANK AND TRUST COMPANY**

*Member Federal Deposit Insurance Corporation*

## CARNEGIE INSTITUTE 4400 Forbes Street, Pittsburgh 13, Pennsylvania

Weekdays 10:00 A.M. to 5:00 P.M.

Tuesdays 10:00 A.M. to 10:00 P.M., through March

Sundays 2:00 to 5:00 P.M.

### CAFETERIA OPEN FOR VISITORS TO THE BUILDING

Luncheon 11:00 A.M. to 2:00 P.M., weekdays

Snack Bar 2:00 to 5:00 P.M., weekdays

Dinner 4:30 to 6:30 P.M., Tuesdays and Thursdays

## CARNEGIE LIBRARY OF PITTSBURGH 4400 Forbes Street, Pittsburgh

Weekdays 9:00 A.M. to 9:00 P.M., reference services to 10:00 P.M.

Sundays 2:00 to 5:00 P.M.

### THE COVER

This order of the Mausoleum at Halicarnassus (Greek Ionic) is one of the casts again on view in the newly decorated Hall of Architecture at Carnegie Institute.

The tomb, one of the Seven Wonders of the Ancient World, was raised by Artemesia of Caria to perpetuate the memory of her husband and brother Mausolos, satrap of Caria, who died about 353 B.C. Time and man have ravaged much of the monument, but the name of Mausolos lives on in the common noun derivative *mausoleum*.

**CARNEGIE MAGAZINE**, dedicated to literature, science, and art, is published monthly (except July and August) at 4400 Forbes Street, Pittsburgh 13, Pennsylvania, in behalf of Carnegie Institute, Carnegie Library of Pittsburgh, and Carnegie Institute of Technology. James M. Bovard, editor; Jeannette F. Seneff, associate editor; Melva Z. Bodel, advertising manager. Telephone MAyflower 1-7300. Volume XXXI Number 3. March, 1957. Permission to reprint articles will be granted on request. Copies regularly sent to members of Carnegie Institute Society. Subscriptions outside Allegheny County \$2.00 a year.

### IN THIS ISSUE

	<i>Page</i>
The International Geophysical Year	Truman P. Kohman 77
Saturday Consort	82
4000 Years of Modern Art	James W. Foster, Jr. 84
The Rea Collection of English and Irish Glass	Herbert Weissberger 87
New Acquisitions Currently on Exhibit	90
Imperial Woman	Solomon B. Freehof 93
Bicentennial Briefs	Rose Demorest 95
Bloodstone or Heliotrope for March	E. R. Eller 99
Athens Today	Freda Gray 101
Allegheny County Bookmobile Schedule	105
John Archer Collection	Helen Becker 105

## MARCH CALENDAR

### ASSOCIATED ARTISTS OF PITTSBURGH

Oils, water colors, graphics, drawings, sculpture, and crafts by local artists will be exhibited in the third-floor galleries from March 8 through April 18. Preview will be held the evening of March 7, with a special showing for patrons that same afternoon.

Nearly 500 pieces were selected from more than 1,100 entries. The jury consisted of Adolph Gottlieb and Henry Varnum Poor, painters; Heinz Warneke, sculptor; Arthur Pulos, craftsman. Twenty-three prizes totaling \$1,975 are awarded, including one offered by the *Pittsburgh Press* in memory of Douglas Naylor. Prizes will be presented March 24, "Meet the Artist" Sunday.

Milton Weiss is chairman of this forty-seventh annual exhibit, and gallery tours are being arranged by Mrs. Paul Chisler. William C. Libby is president of A.A.P.

The exhibition is open regular Institute hours, and also Tuesdays and Thursdays, 10:00 A.M. to 10:00 P.M.

### 4000 YEARS OF MODERN ART

An exhibition of paintings and sculpture organized by the Baltimore Museum of Art may be seen in the second-floor galleries from March 17 through April 21. Realization that all art stems from a common base, that the influence of art is continuous—either consciously or unconsciously—is theme for the exhibit. It shows how abstract art actually preceded realistic.

### ILLUMINATIONS OF GREAT PAINTINGS

Fifty full-size illuminated transparencies of great paintings in museums all over Europe and the United States, and also a quarter-scale reproduction of the ceiling of the Sistine Chapel, have been attracting large numbers of visitors to the permanent-collection galleries on the second floor. The exhibit, presented by *Life* magazine, continues through March 17.

### MERYON PRINTS AND DRAWINGS

Many views of Paris are included in the prints and drawings by one of the great etchers of the nineteenth century, Charles Meryon (French, 1821-68), which may be seen through this month in third-floor gallery J. From the permanent collection of Carnegie Institute.

### ENGLISH AND IRISH GLASS

Eighteenth- and early-nineteenth-century English and Irish glass from the collection of Mr. and Mrs. Henry Oliver Rea is on display in the Treasure Room of the Hall of Decorative Arts currently through April 14.

### CARNEGIE INSTITUTE SOCIETY LECTURES

*Mondays, 8:15 P.M., Mt. Lebanon Auditorium  
Tuesdays, 6:30 and 8:30 P.M., Carnegie Music Hall  
Admission by membership card*

#### MARCH 4, 5—SICILIAN ADVENTURE

Alfred Wolf's illustrated talk deals with one of Europe's quaintest areas, Sicily and southern Italy: Mt. Etna, Agrigento, Palermo, Sorrento, Isle of Capri, the arts and crafts, ancient ruins and historic cities.

#### MARCH 11, 12—SOUTH AFRICA

Clifford Kamen pictures a vast area burgeoning with life and potential greatness. Diamond-cutting, gold-refining, Kruger Park big-game sanctuary, and rarely seen jungle rituals and native dances will be shown.

#### MARCH 18, 19—COLORADO TODAY—AND YESTERDAY

Stan Midgley's humor enlivens his bicycle tour of the mountains and lakes, canyons, ghost towns, modern cities, and national parks of this most scenic state.

#### MARCH 25, 26—AMONG THE SHERPAS OF NEPAL

Norman G. Dyhrenfurth, leader of a major expedition into the Himalayas, will show the new route taken in the assault on 27,890-foot Lhotse. Views of ancient Tibetan rites, the Nepalese, and rare mountain flora are included. This lecture concludes the Society 1956-57 series.

### SUNDAY ORGAN RECITALS

Marshall Bidwell presents a recital on the great organ of Music Hall each Sunday afternoon from 4:00 to 5:00 o'clock, sponsored by the Arbuckle-Jamison Foundation.

March 10 Joan Brotherton will assist Dr. Bidwell in the Chopin *F Minor Piano Concerto*. Wilson College Choir will be guests March 17. On the 31st Mary Brainbridge, pianist, will play the Arensky *Piano Concerto*.

### TIRED OF THE TRIVIAL?

—Then tune in "The Reader" every Sunday evening at 10:00 o'clock from KQV, when John Gibbs reads selections from the classics chosen by a committee of Carnegie Library of Pittsburgh staff members.

### WE HUMANS

Eight panels sponsored by the Mayor's Commission on Human Relations, prepared by the Museum's Section of Man, with explanatory pamphlet published by the United Steelworkers, are now installed on the first floor.

### SMALLER MUSEUM EXHIBITS

*ROSETTA STONE, NORTH AMERICAN MONEY, BIRDS OF PARADISE, BLOODSTONE FOR MARCH, MODELS OF BIG GAME MAMMALS, ANCIENT SOUTH ARABIA, TOYS OF YESTERDAY, STAMPS OF THE UNITED NATIONS, United States commemorative stamps for 1956 and the 1954-56 regular series of United States stamps.*

# THE INTERNATIONAL GEOPHYSICAL YEAR

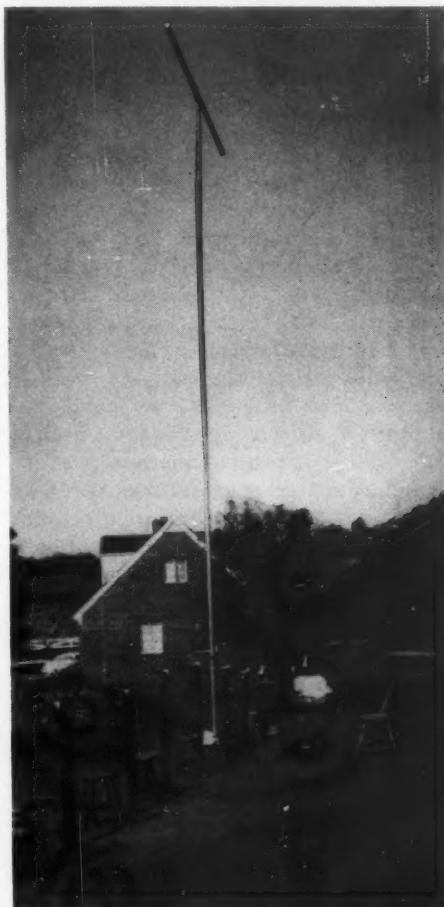
TRUMAN P. KOHMAN

SCIENCE is an endeavor of mankind as a whole, and flourishes best when scientists are not restricted by national boundaries and political control. The international tradition in science received a setback during World War II and the Cold War, with secrecy, loyalty checks, and other restrictions. But we may be emerging into a new era of internationalism in science, signified, for example, by the International Conference on Peaceful Uses of Atomic Energy held in Geneva in August, 1955.

The earth as an object of scientific study must be regarded also as the property of all mankind. Even the geological and geographical features of a particular country have full significance only when related to the worldwide principles of geophysics and geochemistry and to the past history of the planet as a whole.

International collaboration by scientists occurs spontaneously, but it can be advanced by specific planning in which national governments cooperate. The importance of this in earth sciences has been recognized on two special occasions in the past: the First International Polar Year in 1882-83 and the Second International Polar Year in 1932-33. During these periods intensive geophysical studies in the Arctic regions of meteorological phenomena, terrestrial magnetism, the auroras, and the upper atmosphere led to several important findings.

Accordingly, after World War II, a number of scientists promoted the organization of a third international geophysical endeavor, this time to encompass the earth as a whole. In 1951 the International Council of Scientific Unions designated the period from July 1, 1957 to December 31, 1958 as the Interna-



Howard LeRoy

## TYPICAL "MOONWATCH" STATION

An observer at each telescope views, through a mirror, that portion of the sky which lies past the horizontal bar at the top of the vertical pole. If an earth satellite is sighted, the times and positions of its disappearance behind the bar and of its reappearance are to be carefully noted. This is the prototype station at Silver Spring, Maryland. A similar station, one of about eighty in the country, is being installed atop Allegheny Observatory, and will be manned by volunteers from the local Amateur Astronomers Association.

tional Geophysical Year, and created the Comité Spécial de l'Année Géophysique Internationale to organize and coordinate the program of what is familiarly called the IGY. The CSAGI, composed of representatives of various international scientific unions, asked all nations to set up national committees and arranged plenary and regional planning conferences. About fifty countries are now participating.

The United States is represented in the ICSU by the National Academy of Sciences and the National Research Council. These bodies and the National Science Foundation have organized the United States National Committee for the International Geophysical Year and secured the necessary appropriations from our Congress. The USNC in turn has organized several subcommittees and technical panels to plan and coordinate the work of United States scientists in various scientific disciplines and geographical regions. Many projects will involve collaboration between United States and foreign scientists, in both the observational and the interpretational phases of the work.

Such studies and collaborative endeavors can be carried out at any time, but the optimum study of some terrestrial phenomena requires simultaneous observations on a worldwide basis or intensive observations throughout the annual cycle. Hence the coordinated international attack over a period actually somewhat longer than a year. Since many terrestrial phenomena are strongly influenced

---

Dr. Kohman, associate professor of chemistry at Carnegie Tech, received an A.B. at Harvard and a Ph.D. from the University of Wisconsin. After wartime atomic energy research on the Manhattan Project came a fellowship in the Institute for Nuclear Studies at the University of Chicago. He came to Pittsburgh in 1948, where he teaches nuclear chemistry and radiochemistry. His chief research interests are nuclear phenomena in relation to earth sciences and astronomy.

by the sun, particularly by sunspots, flares, and similar events constituting solar activity, the 1957-58 period was selected because it was expected to include a peak in the eleven-year cycle of solar activity.

From the technical point of view the IGY program may be discussed under the following categories.

**GRODOSY.** This is the exact determination of the size, shape, and rotation of the earth. Astronomical observations of apparent positions of the stars and moon will be made from stations all over the world, using special instruments and chronometers. One problem to be investigated is that of possible motions of the continents relative to each other. Another is the nature and cause of the slight irregularities known to occur in the speed of rotation of the earth.

**GRAVITY.** Information about the structure of the earth beneath the surface is obtained from precise measurements of the force of gravity at the surface. Since two thirds of the earth's surface is covered by water, many of these measurements must be made at sea, with instruments lowered to the bottom or mounted in submarines for suspension beneath the waves. The first adequate coverage of the Arctic and Antarctic regions will be made possible by the IGY stations to be established there.

**SEISMOLOGY.** Most of our knowledge of our planet's interior comes from studies of earthquakes, natural and man-made. The IGY program will emphasize the use of new techniques and the extension of observations to new regions—particularly the Antarctic, where several seismograph stations will be installed. One problem of current interest is whether mountains really have "roots" of granite-like rock extending deep into the basic rock of the earth's interior.

**METEOROLOGY.** Systematic observations of the state of the atmosphere will be extended to

ares,  
vity,  
was  
year

IGY  
low-

on of  
earth.  
position  
from  
al in  
m to  
ns of  
other  
ulari-  
ation

ure of  
from  
avity  
arth's  
these  
ch in-  
ounted  
n the  
f the  
made  
lished

of our  
earth-  
Y pro-  
tech-  
ns to  
arctic,  
ill be  
rest is  
" of  
o the  
ons of  
ded to



*Gulf Research and Development Company*

**GULF UNDERWATER GRAVIMETER IN USE**

The instrument is being lowered into the Gulf of Mexico for an observation. It rests on the bottom and is connected to a control panel on the ship by a multi-conductor cable.

unfrequented areas of the earth and to altitudes above 15 miles, in order to understand more completely the large-scale motions of air masses responsible for weather and climate. Special high-altitude "rawinsonde" balloons will be released several times a day from a number of stations in the United States, Alaska, Pacific Islands, circumpolar regions, and cooperating countries, and from weather ships at sea. As they rise to about 20 miles, their motions reveal wind directions and velocities at various heights, and they signal continuously by radio the temperature, humidity, and other properties of the air. In addition, the usual surface records will be made at all stations, and additional observations will be made from aircraft. Particularly important will be the IGY stations in the Arctic and the Antarctic, where much of our weather originates.

**GEOMAGNETISM.** Superposed on the earth's permanent magnetic field are fluctuating magnetic disturbances due to solar radiations, motions of the atmosphere, and thunderstorms. Magnetic storms are particularly large fluctuations, and are often associated with sunspots and solar flares. During the IGY efforts will be made, by comparing data from magnetographs in many parts of the world, to elucidate the mechanism of the solar influence, and to investigate the hypothesis of intense electrical currents in the upper atmosphere which may be associated with the magnetic phenomena. For the latter problem, rocket- and satellite-borne magnetometers will also be used.

**AURORA AND AIRGLOW.** The aurora—the northern and southern lights—is a glow produced when streams of hydrogen atoms from the sun impinge upon the atmosphere. It has

been known for centuries that auroras are most frequent in the polar regions, but it was not until the First International Polar Year that the northern auroral zone was delineated. The corresponding southern zone has never been mapped out, and one objective of the Antarctic IGY stations is to do this. There is also a weaker, but continuous and world-wide, emission of light from the night sky, called the airglow. This is believed to result from chemical reactions in the rarified upper atmosphere. From observations at many stations during the IGY, it is hoped that the patterns of temporal and geographical variations in the aurora and airglow can be delineated and interpreted.

**IONOSPHERIC PHYSICS.** The ionosphere is a layer of the atmosphere, from about 30 to about 300 miles high, in which many of the molecules have been dissociated into ions and electrons by radiations from the sun. The electron clouds reflect radio waves and are responsible for the long distance of radio transmission. The degree of ionization varies with height and with time; besides the day-night difference, there are irregular variations during solar activity. A network of radio-reflection stations will make possible synoptic observations of the pattern of ionization at various times during the IGY.

**SOLAR ACTIVITY.** Because of the strong influence of solar radiations and emanations on geophysical phenomena, a twenty-four-hour watch will be kept from observatories all around the world on sunspots, flares, prominences, the corona, the sun's magnetic field, and radio waves from the sun. Whenever solar events likely to have pronounced terrestrial effects, like large flares, are spotted, special alerts will be communicated to participating IGY stations all over the world.

**COSMIC RAYS.** These rays, which are high-speed ionized atoms impinging on the earth's atmosphere from space, are of interest to

geophysics for three reasons: (1) they are deflected, and some are prevented from reaching the earth, by the earth's magnetic field; (2) the secondary radiations reaching the earth's surface depend on the mass distribution of the atmosphere; (3) some primary cosmic rays are ejected by the sun during the flares which influence other geophysical phenomena. Accordingly, these rays can be used as tools for studying the earth's magnetic field, the atmosphere, and solar-terrestrial relationships. Cosmic-ray measurements from ground and shipboard stations, from aircraft, and even from artificial satellites will be made on an intense world-wide scale during the IGY.

**ROCKET STUDIES.** For getting air samples and making measurements above the range of balloons, rockets have proven invaluable. Somewhat over a hundred United States firings, using half a dozen types of rockets, have been scheduled during the IGY for studying the composition, motions, and ionization of the high atmosphere, solar ultraviolet and x-radiation which cannot penetrate into the atmosphere, and so on. Some rockets will be fired into auroras in attempts to detect directly the atomic streams from the sun.

**ARTIFICIAL SATELLITES.** In order to make prolonged observations at higher altitudes, a vast effort is being put into a program of placing artificial earth satellites into orbits several hundred miles above the ground. These will be lightweight metal spheres containing scientific measuring instruments and radio transmitters. Each will be boosted into its orbit by a three-stage rocket vehicle, and will remain aloft for from a few days to several months. Eventually the slight drag of the outer atmosphere will slow it down, and it will plunge into the deeper atmosphere and be destroyed or lost. Visual and radio observations from the ground of the satellite's position will give information about the

are  
ach-  
field;  
the  
tribu-  
nary  
the  
ysical  
can be  
mag-  
lar-  
sure-  
tions,  
atel-  
wide

amples  
ge of  
able.  
es fir-  
have  
ly ing  
on of  
; and  
o the  
will  
detect  
n.

make  
des, a  
am of  
orbits  
ound.  
s con-  
d into  
e, and  
ys to  
rag of  
n, and  
re and  
radio  
llite's  
t the



*Leslie Jane Kohman Collection*

**RUSSIAN POSTAGE STAMPS COMMEMORATING PREPARATIONS FOR INTERNATIONAL GEOGRAPHICAL YEAR**

Caption on 40-kopeck stamp reads, "Soviet Antarctic Expedition. 1958. Mirny, Antarctica."  
The 60-kopeck and 1-ruble (airmail) stamps read, "Scientific Drifting Station, North Pole."

earth's gravity field and about the density of the air at various altitudes. Meanwhile the satellite will radio down its observations of temperature, solar radiations, cosmic rays, and even micro-meteorites that may strike it.

**OCEANOGRAPHY.** The present network of tide-gauge stations will be expanded to secure essentially world-wide coverage of the oceans. Of particular interest are the little-known slow surface waves with periods of minutes from crest to trough. The United States will have several oceanographic ships in action, measuring ocean currents, sampling the water, taking cores of bottom sediments, and recording bottom topography profiles by continuous echo-sounders while underway.

**GLACIOLOGY.** The IGY program in this field is partly a continuation of the long-range program initiated in the International Polar Years. The United States observations will be made in our western mountains, Alaska, Greenland (in cooperation with Denmark), the Arctic Sea ice pack, and Antarctica. By means of surface observations, drillings, and aerial photography,

measurements will be made of the position, thickness, packing, and movements of the snow and ice in an endeavor to determine the mechanics of glacier flow. Measurements will be made of the snowfall, runoff, and air ablation of the ice. An important objective is to determine whether the amount of glacial ice is increasing or decreasing on a long-term average basis. If there should be a secular decrease in the amount of ice-locked water—that is, if we are still emerging from the ice-age period—we may be in for an embarrassing rise in the level of the oceans in the next few centuries; the sooner we know it, the better!

**ARCTIC STUDIES.** On the drifting ice pack in the Arctic Ocean, the United States will establish and maintain by airlift two Drifting Stations, one north of Alaska ( $160^{\circ}\text{W}$ ,  $78^{\circ}\text{N}$ ) and one above central Canada ( $100^{\circ}\text{W}$ ,  $85^{\circ}\text{N}$ ). From these and stations in Alaska, Canada, and Greenland, measurements will be made in many disciplines, especially glaciology and the earth's magnetism. An encouraging relaxation of the Cold War is

the Russian-American program of cooperative flights over the Arctic Ocean, probably between Nome, Alaska and Murmansk in the Union of Soviet Socialist Republics, throughout the six-month summer "day." These will permit observation of the extent and seasonal changes of the ice pack, and aid in evaluating the conjecture that in a few decades the Arctic Ocean may become navigable because of a gradually warming climate.

**ANTARCTIC STUDIES.** The South Pole is situated on a continent nearly twice the size of the United States. Here, old-fashioned and modern geographical exploration will go hand-in-hand with scientific studies, in the concerted attack of eleven nations from about forty stations. The United States will operate seven of these stations, including one jointly with New Zealand and one right at the South Pole. Aerial photography will supplement over-snow surveys in mapping the only large unexplored regions of the earth. Antarctica consists of two lobes, each largely covered with a vast ice dome. On the smaller lobe, West Antarctica, the dome rises to nearly 10,000 feet above sea level, and on the larger, East Antarctica, the elevation exceeds 13,000 feet. Here the ice is thousands of feet thick, and portable seismographs will be employed to measure the thickness at many points and thus determine the topography of the underlying land. This will also permit a calculation of the total mass of ice—of considerable importance for the future, should it be gradually melting. Preparatory work in Antarctica has been going on for over two years, and the continent will probably never again be uninhabited by man.

**GEOCHEMISTRY.** Many geophysical phenomena involve chemical processes, and geochemical research will be an important part of the IGY program. As an example, a comprehensive study will be made of the distribution of carbon dioxide between the

The Department of Fine Arts  
Presents the Final of Four Concerts by

### THE SATURDAY CONSORT

March 16, at 3:30 P.M., Gallery G  
(Admission fee of 50 cents)

### BACH AND HIS CONTEMPORARIES

Compositions by Handel, Telemann, Scarlatti, Soler, and Bach performed on Renaissance and baroque instruments.

*Consort personnel:* Colin Sterne, Roberta Sterne, Homer Wickline, Patty Grossman, Conrad Seaman, and Karl Neumann.

*Sponsors:* Mrs. James H. Beal, Mr. and Mrs. Paul G. Benedum, Mr. and Mrs. Leland Hazard, Mr. and Mrs. H. J. Heinz II, Mr. and Mrs. James F. Hillman, Mr. and Mrs. Roy A. Hunt, Mrs. H. H. Laughlin, and Mr. and Mrs. Charles J. Rosenbloom.

atmosphere and the oceans. This may help to evaluate a theory according to which changes in the thickness of the carbon dioxide heat blanket around the globe have been responsible for the ice ages, and to predict whether the world is in for another such period. Radioactive age determinations will also be employed, using tritium (the hydrogen 3 isotope) and radiocarbon (carbon 14) to study the past history of the oceans, glaciers, and ice packs.

It is thus seen that the IGY is not only international but also interdisciplinary. Even biology will play a role, particularly in Antarctica, where the best opportunity yet will be available for observing the flora, fauna, and ecology of that continent and its surrounding waters.

Pittsburgh and Pittsburghers are active in several phases of the IGY program. Our Weather Bureau is an official meteorology

station in the world-wide network. It is a station on the 70°-80°W Meridian Line, a link in one of three such chains of stations spaced around the globe for concentrated pole-to-pole observations. Included in its schedule will be four rawinsonde balloon releases each day from the Greater Pittsburgh Airport Observatory.

As important as putting an earth satellite into an orbit will be "discovering" it and determining just what its orbit is. Amateur astronomers are being organized into "moon-watch" teams to patrol the skies. During each evening and morning twilight, teams of telescope observers, timers, and reporters will keep watch on the meridian overhead. If the object is sighted, its position and time of meridian passage will be instantly telephoned to an analysis center at Cambridge, Massachusetts, where its orbit will be computed rapidly by high-speed electric brains. The Amateur Astronomers Association of Pittsburgh has organized thirty-six local enthusiasts into one of about eighty such teams in the United States. They will operate from the roof of the Allegheny Observatory of the University of Pittsburgh in Riverview Park, where there will be an installation similar to that shown in an accompanying illustration.

Radio amateurs will also participate. Short-wave "hams" are being asked by the American Radio Relay League to report to a data center their observations on long-distance communication throughout the IGY.

The Spectroscopy Laboratory of the Department of Physics at University of Pittsburgh is carrying out laboratory investigations on rarefied gases, which will be important in interpreting the field observations of aurora and airglow. Among their experiments is the study of the light of an artificial aurora produced right in the laboratory by bombarding low-pressure air with high-speed hydrogen atoms.

The Gulf Research and Development Corporation laboratory at Harmarville has developed some excellent geophysical research instruments. It has loaned recording magnetic storm monitors to several universities for IGY use. An underwater gravimeter has been supplied to the Finnish Geodetic Institute. Two Gulf quartz pendulum gravimeters will be taken by a University of Wisconsin team to the South Pole. Moreover, Gulf will pool its own magnetic and gravity data through the U. S. Coast and Geodetic Survey.

Serendipity may also play its important role. Pittsburgh's claim to be the world center of the atomic industry will be strengthened late this year when the Shippingport nuclear power plant starts operating. It happens that some tritium may be among the by-products of its chain reaction, resulting in "tagged" water. This will be discharged occasionally into the Ohio River, at levels far below health tolerances but nevertheless measurable by sensitive radiation detectors. Geophysicists and geochemists are certain to take advantage of this excellent opportunity to trace the flow of water down the Ohio and Mississippi rivers and out into the Gulf of Mexico.

Optimists, like the author, believe that international collaboration between scientists can contribute to the conditions for peace in the world, and that the IGY experience will be most valuable in this respect. But even the pessimists will have to admit that two years hence we should know a lot more about our planet as a result of this coordinated attack.

In spite of the annual newspaper stories, the "first Robin" is no sign of spring. At least a few Robins can be found in western Pennsylvania practically every winter.

The first opera performed in Pittsburgh was *The Barber of Seville* on April 16, 1838 at the Pittsburgh Theatre on Fifth Street (now Fifth Avenue). It was under direction of Francis Courtney Wemyss and drew a \$348 house.

# 4000 YEARS OF MODERN ART

JAMES W. FOSTER, JR.

Out of the innumerable points of contact and rapport between the contemporary artist and creations of the past we have chosen a few of the most significant to be demonstrated in the exhibition 4000 YEARS OF MODERN ART.

Since every genuine work is conditioned by the culture in which it was produced and by its function within this culture, no attempt has been made to "match" old and modern works—to find near-duplications of compositions that could be only reiterations on the part of the modern artist. Instead it has been our aim to show the extent to which certain preoccupations of the artists of today seem to have been shared by artists of the past.

Our venture is less concerned with the aspect of timelessness than with that of timeliness. Thus we have concentrated on those features which impressed us as being distinctly modern, though they appear in objects hundreds or thousands of years ago.

Rejection of the imitation of reality is the most obvious characteristic of the art of our era. This fact determined our selection. The objects included all reveal, though to a varying degree, their maker's lack of concern with naturalistic representation and show instead his use of simplification, stylization, or abstraction.

Relatively little was yielded for our purpose, consequently, from the artistic heritage



ARCHITECTURAL BRACKET: SEATED MAN

French, fifteenth century  
Limestone, 13½ inches high  
Lent by the Walters Art Gallery

of the humanistic civilizations in which man was considered the module of all things, since the obvious devices (and only these) employed in the styles of these periods are rejected in contemporary art. The majority of the examples shown together with modern American and European works stems rather from the other great periods and areas of civilization—ancient Egypt, the archaic cultures of the Mediterranean, medieval Europe, Persia, the Far East, and the primitive cultures of Pre-Columbian America, tribal Africa, and Oceania.

Only relatively recently have the works of some of these civilizations been recognized

Mr. Foster is assistant director of the Baltimore Museum of Art, which organized this exhibition this past autumn. The show is now on tour and will visit Utica and Buffalo, as well as Pittsburgh.

on the basis of their artistic quality; they are no longer considered merely source material for ethnological or historical research. Such revaluation of forgotten or scorned styles often takes place at a moment when the vanguard art of a period reveals characteristics that seem to correspond to those apparent

in the earlier works. This does not mean that there necessarily exists a direct influence of the older style upon the new work, or that the resuscitation of the earlier style has been prompted directly by the art in vogue. The connection seems to be a more subtle and a more basic one: the modern works as well as



Plates courtesy Baltimore Museum of Fine Arts

SINGING MAN (1928) BY ERNST BARLACH (German, 1870-1938)

Bronze, 19½ inches high

Lent by Mr. and Mrs. Alan Wurtzburger

the formerly neglected styles which suddenly become popular both express the *Zeitgeist*, the spirit of the epoch that determines the vision and approach of the artists and the public.

The theme of the exhibition may almost seem to have been expressed by Pablo Picasso, who said, "To me there is no past or future in art. If a work of art cannot live always in the present, it must not be considered at all. The art of the Greeks, of the Egyptians, of the great painters who lived in other times, is not the art of the past; perhaps it is more alive today than it ever was before."

The exhibition 4000 YEARS OF MODERN ART will be on view at Carnegie Institute from March 17 through April 21, and consists of 130 works of art dating from the ancient Sumerians and the Cycladic Greeks of the third millennium B.C. to the year A.D. 1956. It will be accompanied by a fully illustrated, descriptive catalogue, with an in-

troduction by Gertrude Rosenthal, senior curator of the Baltimore Museum of Art and organizer of the exhibition.

The outline of the exhibition is as follows: Introduction—The Use of Simplification and Stylization; The Quality of Mass; Interrelation of Volume and Space; The Role of Rhythm in Design; Pattern as a Compositional Device; Multiple Viewpoints and the Rendering of Space; The Symbolic Value of Color.

\* \* \*

Embedded in the polished limestone pillars at the Museum-Fine Arts entrance of Carnegie Institute may be seen countless fossils in cross section—nautilids, gastropods, clamshells, corals, and other forms of early marine animal life.

\* \* \*

Of the twenty-two kinds of snakes in Pennsylvania, nine lay eggs. The remaining thirteen species give birth to young, and this group includes all three of the poisonous snakes.

---

## ENJOY YOUR FIREPLACE

### BURN **DISCO**® THE PERFECT FIREPLACE FUEL



**SAFE ♦ CLEAN ♦ ECONOMICAL**

## THE REA COLLECTION OF ENGLISH AND IRISH GLASS

HERBERT WEISSBERGER

PERHAPS better to understand the fine achievement of English glass at the later period, as seen in the pieces from the collection of Mr. and Mrs. Henry Oliver Rea, of Sewickley Heights, Pennsylvania, currently on exhibition in the Treasure Room at Carnegie Institute, it might be worth while to cast a quick glance at the period of its modest beginnings.

The glass produced in England in the Middle Ages, in the woodland regions of Surrey and Sussex, has been called that of a humble craft, and the output of utilitarian objects has a greenish coloration. On the continent, the second half of the fifteenth and sixteenth centuries witnessed supreme advances in technique, form, and decoration made by Venice. And Venetian influence traveled far. In the Old Netherlands, for instance—and this would include today's Belgium—glass in the Venetian manner was made at several places.

Defying restrictions and penalties, Venetian glass blowers managed to reach other countries, where they practiced their native art. In England, besides glassmakers from Lorraine and elsewhere, there are records of emigré glass artisans from the Adriatic City. We know that Jacopo Verzelini was granted a license in 1575 by Queen Elizabeth to make "dryinking glasses such as accustomable

The current exhibition of Irish and English glass is the fifth to be arranged in the Treasure Room by Mr. Weissberger, the curator of decorative arts, since it was opened in 1954. The preceding exhibits have included the Heckert portrait miniatures, the Alberts Hoechst porcelain, Tiffany glass from the Institute collection, and the Hovey Chinese pottery and porcelain.

made in the town of Murano," the island of this name near the city of Venice. A goblet at the British Museum, with the date 1586, the initials "G S," and the legend "In God is al mi trust," all diamond engraved, as well as other goblets, is regarded to have been made by him.

Venice rediscovered an old process of decolorizing glass by employing an oxide of manganese. This agent will remove a greenish tint caused by traces of iron in the silica from which glass is fused. Because of its "whitishness" and transparency, the product was likened to rock crystal and known under the name of *cristallo*. It was not, however, of perfect transparency, and it is at this point that we return to England, where a type of *cristallo* was also produced until 1670.

Bernard Rackham, the English scholar, whom I shall quote in the following lines, calls the year 1611 a landmark in the glass industry of England. In that year a patent was granted for the construction of furnaces to be fired with coal. Though used "spasmodically" before in Germany, this new practice produced an effective change in the "metal"—the glassmaker's name for the fused or finished material of glass. The use of coal instead of wood necessitated the substitution of covered for open crucibles to protect the glass mixture in the furnace from impurities; the resulting loss of heat prompted the search for a more readily fusible metal, and this, in due course, led to the addition of a large proportion of lead as a flux. English lead glass, commonly known by a trade misnomer as "flint glass," was thereby brought to birth. In 1673 and 1674 George Ravenscroft set up glassworks and, assisted



COVERED BAROQUE BOWLS WITH TRAILED ORNAMENTATION.  
TWO WITH CROWNS AS FINIALS, ONE WITH AIR-TWIST STEM.

by an Italian from Altare, near Genova, invented glass of lead which has since been the standard English type for tableware. England thus began to come to the fore amid a competing European glass market, in the later part of the seventeenth century.

Of positive importance in its own right is the fine array of Irish and English glass, mostly of the eighteenth century, generously loaned for the present exhibition by Mr. and Mrs. Rea.

Of the early eighteenth century is a pair of English candlesticks with hollow vase-shaped balusters on subtly terraced domes. The shape of these two pieces, pure in form, harmonious in balance, harks back to ancestors in bronze or brass of the period of the Renaissance. They afford, indeed, excellent examples of how glass at times followed models established by the metalcrafts.

Reflecting the taste of the baroque are several specimens of a group dating hardly later than the first two decades of the eight-

eenth century. These are bowls, two of them on tall stems, producing a chalice-like effect (ILLUSTRATED), and a stupendous ladle. The combination of ornament and allover design, admirably adapted to the solidity of a glistening body and the silkiness of texture, elevates this last mentioned rich piece far above its basically utilitarian purpose.

Among the common characteristics of this glass are the amplitude of shape, truly baroque in tendency, and a raised ornament comparable to a chain of open links. The technical process of applying that kind of ornament would fall into the general category of *trailing*, in this instance particularly of a "softened glass drawn out into threads, and . . . these wound upon (trailed) and attached to a vessel." We hear of this process also referred to as *nipt diamond wates*, a term held to correspond to an identical entry in Ravenscroft's price list of 1677.

Attractive sweetmeat stands that, with their arms branching out in tiers and their

height, would be commanding elements on any festive table, stand next to several examples clearly illustrating the neoclassic, or the last artistic phase of the eighteenth century.

Neoclassicism, often and not incorrectly associated in English architecture and furniture with the Adams brothers, and in ceramics with Josiah Wedgwood, was the outcome of a conscious revivalist state of mind that looked anew for and found its inspiration in classical antiquity.

Several Irish boat-shaped bowls and salts in this fine collection, varying as to base, stem, and bowl proper, demonstrate the participation in the neoclassic movement of glass made in the British Isles which, it should be noted, at that period set a vogue in other countries, where it was profusely copied.

The sweetmeat stands and the neoclassic glass considered here have been assigned to Ireland and some specifically to Waterford.

Not too frequently in the history of the arts can be found as nice a case to prove dependency on economic factors as in connection with eighteenth-century Irish glass. Exemption from a tax levied on glass manufacturers, such as was levied in England, had already encouraged glass-manufacture in Ireland for local consumption. It was, however, the free trade agreement of 1780 between the two countries, whereby Irish glass and other goods could be exported to England duty free, that infused vigor into the Irish glass industry. English glassmakers, to be sure, endowed with skill and knowledge, were employed in Irish glass factories. This, and the consideration that forms of Irish glass were tributary to vogues prevailing in England, stimulate the occasional reference to "Anglo-Irish" glass. Such a term, though not unjustified from a wider historical perspective, fails, however, to honor Irish glass as

perhaps some of the most handsome or loveliest produced.

The problems of assigning specimens of glass with a degree of infallibility to either England or Ireland, or of identifying genuine pieces, unmarked or lacking other evidence, as products of individual glasshouses in Ireland, must often prove harassing if not cruel, even to the experienced student. The nonspecialist cannot attempt to solve them.

Two pieces in this exhibition carry their name of origin. These are a pair of decanters, wheel-engraved, their necks decorated with three notched double rings, and the impressed inscription "Cork Glass Co." on the bottom.

The nineteenth century in this show is exemplified by Mr. and Mrs. Rea's superb English bowl, lun-shaped with a flat cover, of about 1835. Though of a later stage, there still applies Mr. Rackham's verdict that "English glass owes its supreme beauty as a material to its brilliance, and its unrivaled aptitude for reflecting and refracting rays of light; its weight made for stability and dignity of outline, and the sound craftsmanship of English glass at its best atones for any lack of the fancifulness or elaboration of finish belonging to the more ambitious performances of Venice and Bohemia."

\* \* \*

#### SPRING IS JUST AROUND THE CORNER

Did you know that at a given altitude, spring moves north at the average rate of about 17 miles a day, and climbs a mountain at about 100 feet per day?

Before this issue of *CARNEGIE MAGAZINE* reaches you, some of the flowers on the red maples will be in bloom. They often blossom by mid-February, but are a little late this year. The earliest record for the charming little Snow Trillium of wooded slopes in our region is March 4, while the dandelion-like flowers of the Colt's Foot are usually seen on clay roadside banks in late February.

When ice and snow melt, the water contracts until it reaches a temperature of about 39.2 degrees Fahrenheit, after which it expands as the temperature rises. Does this have something to do with the flow of sap from the maple tree in late February or March? —O. E. JENNINGS

## NEW ACQUISITIONS CURRENTLY ON EXHIBITION AT CAFÉ



UPROOTED BY VICTOR CANDELL  
Gift of Mrs. Meredith Norcross



THE CONCERT BY DAVID  
Gift of



INTERIOR BY VIEIRA DA SILVA  
Patrons Art Fund Purchase



ANDS BY G.

AT CARNEGIE INSTITUTE



LANDSCAPE BY ADOLPHE MONTICELLI  
Gift of G. David Thompson



OVERTURNED CARRIAGE BY DAVID G. BLYTHE  
Gift of G. David Thompson

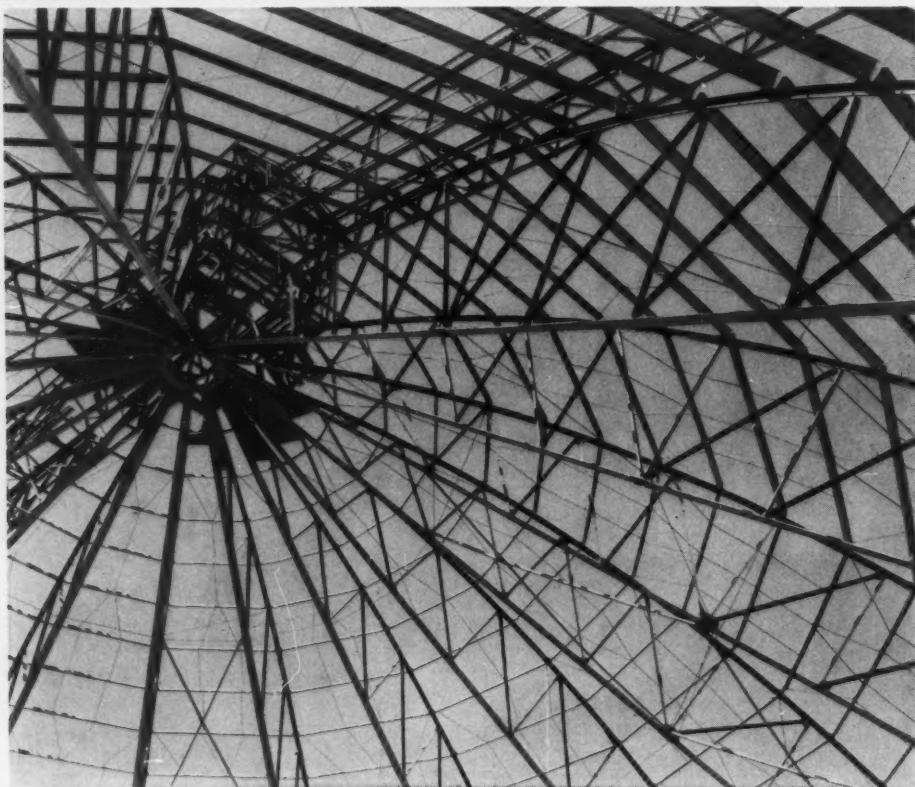


LANDSCAPE BY ALEXANDRE GARBELL  
Gift of G. David Thompson



LANDSCAPE BY FRANCIS BACON  
Gift of Edgar J. Kaufmann, Jr.

Only STEEL can do so many jobs so well



**Steel Spider Web.** If you ever needed it, here's proof that amazing things can be done with steel. This is an 83-foot-high dome for a potash storage building that will be covered with steel sheets. This complicated structure was *prefabricated* and erected by American Bridge Division of U. S. Steel.

**UNITED STATES STEEL**



# IMPERIAL WOMAN

Commenting on Pearl S. Buck's recent novel of decadent China

SOLOMON B. FREEHOF

ONE of the leaders of thought in the history of art was that eminent Victorian, John Ruskin, and his most important work was *The Seven Lamps of Architecture*. In the wide scope of this creative book John Ruskin demonstrated to the satisfaction of a number of generations the close bond that always exists between ethics and art.

Ethics is the implied philosophy of our relationship to society, our individual relationship to other people; art is the expression to other people of our attitude to the world. Thus ethics and art are close to each other; and Ruskin wanted to indicate that the dominant ethical mood of a civilization or a century determines or is traceable in the art it creates.

The ancient Greeks molded their lives upon that same idea, namely that ethics and art are united. That is what they meant by their famous phrase, "the good and the beautiful" (*Kalon K'agathon*). They actually demonstrated this joint ideal in their high achievement in both ethics and art. In ethics they followed the principle of balance and harmony; "nothing to excess" was their great motto. Do not be so brave as to be foolhardy, or so careful as to be niggardly. Balance vices and virtues and find the golden mean. This same harmony they sought in ethics, they aimed for in art. Their Parthenon was a perfect balance of mass and line and space—not too much of mass as in the Egyptian pyramids, not too high for the area as in the

medieval cathedrals, but a perfect balance. Thus the Parthenon bespoke their art. Plato's *Republic* voiced their ethics. Harmony in one and balance in the other; the good and the beautiful.

This close relationship between the ethical mood of an age and the art it produces is clear also in medieval times. The ethics of the Greeks disappeared in the introspective centuries of Christianity. The Greek ethics was worldly common sense. But the age of faith in Christian Europe was not concerned with living your earthly life, because the true life was not here at all. Here, at best, if God is good, you have opportunity to prepare yourself for eternal life. So the dominant ethics in the medieval age as taught and practiced by the exemplary people was always otherworldly. As the ethics was otherworldly, so was the art. Instead of that beautiful Parthenon merging with perfect balance into the landscape, the otherworldly medieval ethics produced an earth-spurning art. So the heaven-soaring Gothic spire became the perfect artistic expression of the otherworldly ethics of the early Middle Ages.

If, then, there is an intimate relationship between the ethics and the art of an age, what can possibly be the artistic prospects of an age that has hardly any ethics at all? Suppose the time comes when people no longer believe in righteousness, when the very word itself has an antiquated sound, when words like *character*, *reliability*, *trustworthiness* become antiquarian terminology. Suppose the age comes when people no longer feel a sense of duty. Could such an age produce an art, a really great art? What would Ruskin say?

---

This is the second of four articles to appear this season in CARNEGIE MAGAZINE, derived from book reviews given this past autumn by Dr. Freehof for the general public. The reviews are given at Temple Rodef Shalom.

It would be hard for him to imagine that. After all, Ruskin lived in the midst of those massive staunchnesses of the Victorian era. Nevertheless, I think his doctrine, as expressed in *The Seven Lamps of Architecture*, can be extended in this way: There is an intimacy between the ethical attitude and the achievement of art, even when the ethical attitude is negative. Even when an age does not believe in righteousness, its very skepticism reveals itself in art.

This is not merely theoretical. Charles Baudelaire, the greatest of a certain school in France, beginning about 1850, wrote beautiful poems headed with the general title *Les Fleurs du Mal*—*Flowers of Evil*. He was an ethical nihilist and because of it produced a certain beautiful art. He was not alone. Arthur Rimbaud and Paul Verlaine produced a certain special kind of beauty precisely because of their ethical rebelliousness. And that same rebellious, antiethical art was brought over to England by the same sort of person, Oscar Wilde. Now this type of art has been given the name of "decadence" in art history. "Decadence," of course, is a deprecatory term. But it is important to understand decadent art, for it is a genuine expression of a social mood that can always be recognized.

The strange thing is that it appeared in this optimistic, pioneer country, the United States, in an individual whom we knew and never appreciated. Edgar Allan Poe, rejected by America, became a world literary figure under the sponsorship of Baudelaire. What did he see in Edgar Allan Poe that we had brushed aside? Poe was a man who did not live the usual, socially adjusted life. He was a drunkard, always unhappy, always alone. This rebel produced from his genius, precisely because of his rebellion, a type of literature we never had in America before, one that was new to the world and was, indeed, the beginning of decadent art.

Ethical decadence always produces two effects in art and you will recognize it whenever you see it. It must be recognized without contempt and with understanding. In the first place, since it does not believe in the orderly organization of society, as the Greeks did, and has no faith in an eternity after this life, as the people in Gothic times did, then all it believes and cares about is on the surface. Therefore, in art, all that it expresses are the surface themes, surface nerves, oversensitivity. Therefore, also, there is a great deal of symbolism, a great mass of color, different colors, all the surface reactions. It is not the mood of decadence to organize such reactions into one serene picture, but to add decoration to the surface of things.

Where, however, in decadence, the artist goes below the surface feeling, he goes into the subconscious, into the mysterious, into the occult. Both effects are found in Edgar Allan Poe's work. Do you remember the poem, *The Bells*? "The tintinnabulation of the bells." He looked for these little, ringing, surface sounds. It was a brilliant achievement of surface effects, a sort of repoussé rather than basic form in poetry, like silver hammered out in all these tiny decorations till there is not a smooth surface. When his art went deep, it went deep into horror and the occult, as in *The Pit and the Pendulum*, or *The Murders in the Rue Morgue*, in which the ape committed the murders.

These are the marks of decadent art—either oversymbolism, overdecoration, or the occult, deep superstition, and horror. So Oscar Wilde has his charming little statements and his light, little, decorated stories, laughing at any serious intent—and then also the horror of *The Picture of Dorian Gray*. So, too, Charles Baudelaire.

This decadence must not be scorned. It is an authentic development in the history of art that Ruskin's theory must be extended to

## BICENTENNIAL BRIEFS

### 1845 . . . Calamity at Pittsburgh!

News spread around the world of the great fire of April 10. Recovery from the flames was a major task as the ruins were rebuilt.

—ROSE DEMOREST

cover: namely, that the ethical rebellion, the ethical decay, produces a specific kind of art that began in literature with Poe and Baudelaire, and shows its influence in paintings today—all the overdecoration of impressionism and, in surrealism, the twisted, monstrous horrors of the subconscious. That does not mean it is an unworthy art. It is simply the art of the decadent.

Why should it surprise us that the fading of the moral sense should, in its very fading, produce art? What is the most beautiful time of the year, at least as far as nature's decorative colors are concerned? Is it not the time when the vital powers of growth fade, the sense of development ceases, and "the melancholy days have come"? Is it not the dying splendor of nature's year that produces the brilliant decorations of the autumn foliage? So it is often in human life. The very dying away of ethical idealism produces the brilliant decorations and the inner horrors of famous decadent art. We cannot understand the history of the great civilizations that have lived long enough to develop all phases and moods without understanding the phenomenon of decadence in ethics and in art. An example or two can make it clear.

The Roman Empire in its classic days of the brave Horatius, the great consuls, of Brutus, days of character, understood classic art. In

the days of decadence, of the corrupt Empire, what we have is overdecoration, the over-elaborated Corinthian—no more the simple Ionic, the simple Doric pillar. When Rome became decadent, its art became decorative. Is it not the same in Byzantium? What do we mean when we say, "Byzantine art"? We refer to the time of the great moral corruptions. How can we understand all that happened in Constantinople and Byzantine art without understanding that it is elaborated, decorative beauty in which handicraft takes the place of form-creating? When morals faded from the Byzantine court, art became showy and decorative. It is always so.

Pearl Buck must have sensed all this in the sequence of her novels of China. First she wrote for us that quiet, unspectacular heroism of *The Good Earth*, in which duty, patient and enduring, dominates, and for which she justly received the Nobel Prize. Then she wrote of the ferment of revolution in her novel *Sons*, and of the lonely courage of an isolated family in *Peony*. Now she takes us to the corruption of the last years of the Empire, the Forbidden City with all its corroded morals. I believe she realized we cannot understand the millennial Chinese civilization without understanding also the phenomenon of its decadence. Her newest book might be called a classic picture of China in decadence.

That gorgeous court in the overdecorated city of Peking, the highly ornate Forbidden City enclosed by many gates, governed by a corrupt Emperor, ruled actually by eunuchs and their intrigue, replete with beautifully carved jade and magnificently decorated screens—a decadent world in the splendiferous fall colors of decadent art: this was the closing autumn of the ancient Chinese Empire. Pearl Buck felt we would never understand the totality of China if we confined ourselves to the patient peasant of *The Good Earth* or the lonely families of *Peony*. We have

## Breakfast at Mme. Bégué's

**B**reakfast at Bégué's! Back in the 80's and 90's, that suggestion brought a gleam to the eye of the New Orleans gourmet; for upstairs in the modest brick house at Decatur and Madison in the Vieux Carré, breakfast was no ordinary meal. Eight courses at least, beginning at 11 o'clock and ending just short of three, it was from start to finish a work of gastronomical art.

The artist was Madame Bégué herself, a strapping Bavarian who, after coming to New Orleans, had married first a French bartender, then a French butcher. As a happy result, her cooking was a magical mixture of French, German and Creole.

Breakfast at Bégué's began with thick chunks of bread and sweet butter passed by the host, Hypolite Bégué. Then came platters of boiled shrimp. There was no sauce, only a delicate herb flavor that lingered after each bite. An omelette took the spotlight, a beautiful golden puff flecked with parsley and a mysterious black spice about which Madame would simply shrug her shoulders and laugh.

Tripe in a peppery mustard sauce was followed by fried chicken and potatoes.



Then came a broiled tomato and a beef-steak, the final contributions from Madame's seasoned skillet. For dessert—if breakfasts have desserts—there was ripe cheese and crisp apples. Finally—café noir served with a burst of flaming brandy.

Madame Bégué's first patrons were butchers of the Vieux Carré, who, after working since daybreak, would climb her stairs for a second breakfast; but culinary genius like hers could not be hidden, and, before her death in 1906, thousands of New Orleans visitors had indulged in the delights of her table.

For flavor at its finest in '57, try  
the world-famous 57 Varieties.

H. J. HEINZ COMPANY

57

to see China in its decadent splendor before we know the story. For artistic contrast against this splendor of the fall of China she sets the gigantic figure of a remarkable woman, the last Empress. All that is the purpose and meaning of the book *Imperial Woman*.

The story begins about the year 1840. There are many characters, as there are bound to be in a huge book of this kind. Always in a picture of decadent art there has to be an overcrowded canvas. Those that mattered most are: the girl who became Empress, after changing her name at every stage of her rise; then her cousin who became Captain of the Guard, Jung Lu; and the one noble, patriotic prince, child of a royal concubine, brother of the Emperor, the Prince Kung. Everybody else is a secondary character. Perhaps we ought to include the young eunuch who, when the woman rose, rose with her to palace influence and national power.

Pearl Buck took a great risk with this book because, on the face of it, the book is irrelevant to our lives. What do we care these days about the overdecorated, the old Chinese Imperial Court with all its superstitions and all its plots and counterplots, this old Byzantine kind of world? It is gone forever. If she had told us a story of the corruptions and the weaknesses in the present Communist regime in China, it would have had relevance for us. But what she writes about is as dead as the Czarist Court. Who cares now about corruption in the palaces in St. Petersburg? It is gone with the wind of history.

But these serious and able authors write with a sort of sixth sense; somehow their subconscious rises to help them. There is, after all, a great relevance to us in the story. It is not the Court with its corruption and decadence, for that is all gone, but rather the environment that determined its destiny that is so closely akin to our experience. In fact, this book would not have meant so

much to us thirty years ago when our world was still safe. Then we could not have imagined ourselves in a dissolving world. But today, unfortunately, we can easily imagine it. We know her, the Empress with her sense of insecurity. We all have it. There is a corrosion all around our world. There is lack of a sure future. The background of this novel, the tragedy of a fading world, is real for us all.

Pearl Buck, the daughter of Christian missionaries to China, has a certain special spiritual sensitiveness. She understands that it is precisely this new feeling of world uncertainty in the midst of a dissolving world scene that has turned so many people back to an interest in religion. But turning with an interest to religion is far from attaining firm religious faith. A firm religious faith would give people a sense of inner security in a time of insecurity. It is exactly expressed by the hymnologist:

Change and decay in all around I see.  
O, Thou who changest not,  
Abide with me.

Such faith may well be yearned for today, but it is hard to attain.

So we moderns, in a changing, dissolving world, need other sources of strength. The religion we long for is not yet firm enough to help us. Then we must seek our strength secondhand, borrow it from those who have it. Ultimately that is the daily source of our courage, because the dissolution we see around us today has been repeated all through the ages in every family. There is no family that goes through its history without frequent crises that seem destined to break it up altogether. But there is always one person in the family who has strength, who has faith that the storm will pass. This strength is somehow borrowed from the reliable one by the nervous ones, and thus the family lives

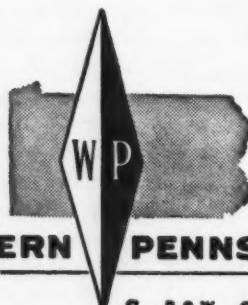
[Turn to page 104]

# Banker's 90 - Mile Calendar

Thomas M. Watt is a Senior Vice President of Western Pennsylvania National Bank in charge of Community Offices. His calendar of appointments takes him on a regular 90-mile tour of all WPNB offices. From California to Sharpsburg, Pennsylvania, and many points between, Tom Watt brings advice, assistance and a warm personality that have made him a favorite with our Community Office managers. His efficiency is one reason why all WPNB offices can offer complete banking services to all their customers.



*Photo by Clyde Hare*



**WESTERN PENNSYLVANIA NATIONAL BANK**

*a new approach to community banking*

Member Federal Deposit Insurance Corporation



*Museum mineral collection; Grogan Co.*

POLISHED HELIOTROPE MATRIX, FACETED AND CABOCHON GEMS, AND RING

## BLOODSTONE OR HELIOTROPE FOR MARCH

Who in this world of ours their eyes  
In March first open, shall be wise,  
In days of peril firm and brave,  
And wear the bloodstone to their grave.

WHEN dark or bright green chalcedony is flecked with small inclusions of red jasper, resembling drops of blood, it is known as bloodstone or heliotrope. The stone is a variety of the nearly omnipresent mineral, cryptocrystalline silica. Possessing a fibrous structure, it lacks, however, the clear crystalline form of rock crystal or quartz.

The name heliotrope, the preferred term, is a combination of the Greek words *helios*, the sun, and *trope*, a turning—or sun-reflecting. The name was applied to it because it was believed that, when placed under water, it would give a red reflection similar to the sun.

Bloodstone, symbolizing courage, is usually considered the birthstone for March, although aquamarine is sometimes used. Bloodstone originated on Calvary at the crucifixion of

Christ, an old legend relates, when drops of blood from a spear thrust by a Roman soldier fell on dark green chalcedony.

In early Christian times, sacred objects were carved out of it in such a manner as to represent drops of blood. One fine specimen of the head of Christ, so sculptured, is in the Chicago Museum of Natural History. Many handsome antique Greek and Roman articles of bloodstone cut both cameo and intaglio are to be found in museum collections. Bloodstone was used especially for seals by early Babylonians and Egyptians. American Indians used it in the shape of a heart, as an amulet.

Most heliotrope or bloodstone is mined in India. A very fine grade is found in the Hebrides, Isle of Rum. Georgia, California, and Oregon produce heliotrope in deposits of considerable size. Most collectors and lapidarists in search of specimens to polish prospect for weathered pebbles in stream beds and gravel deposits.

—E. R. ELLER

The best-known  
name in glass . . .  
also means

**up-to-the-minute  
merchandising**

To sell a product successfully, it must be a *good* product. And Pittsburgh Plate Glass Company has been making high-quality products since 1883.

But there's another side to successful selling. It's getting the product to you when you need it.

To this end, the Merchandising Division of Pittsburgh Plate Glass Company has a network of hundreds of Distributing Branches all over the country to serve jobbers, distributors, dealers and other customers.

Yes, the best-known name in glass means *more* than glass. It also means up-to-the-minute merchandising.

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY





THE RESTORED STOA OF KING PERGAMON IN ATHENS, OF RED TILE WITH MARBLE COLUMNS

## ATHENS TODAY

FREDA GRAY

IT is fascinating to compare the cultural heritage we have received from the Greek and the Roman civilizations. From the latter we have most of our legal system, almost all our military discipline, and our spectacular love of monumental government buildings. The Greeks have left a gentler heritage of thought triumphing over action, and, above all, of free discussion in pleasant surroundings. No one who has not experienced the rigors of the brutal Greek summer sun can fully appreciate the meaning of "the groves of academe." Greek scholars longed for

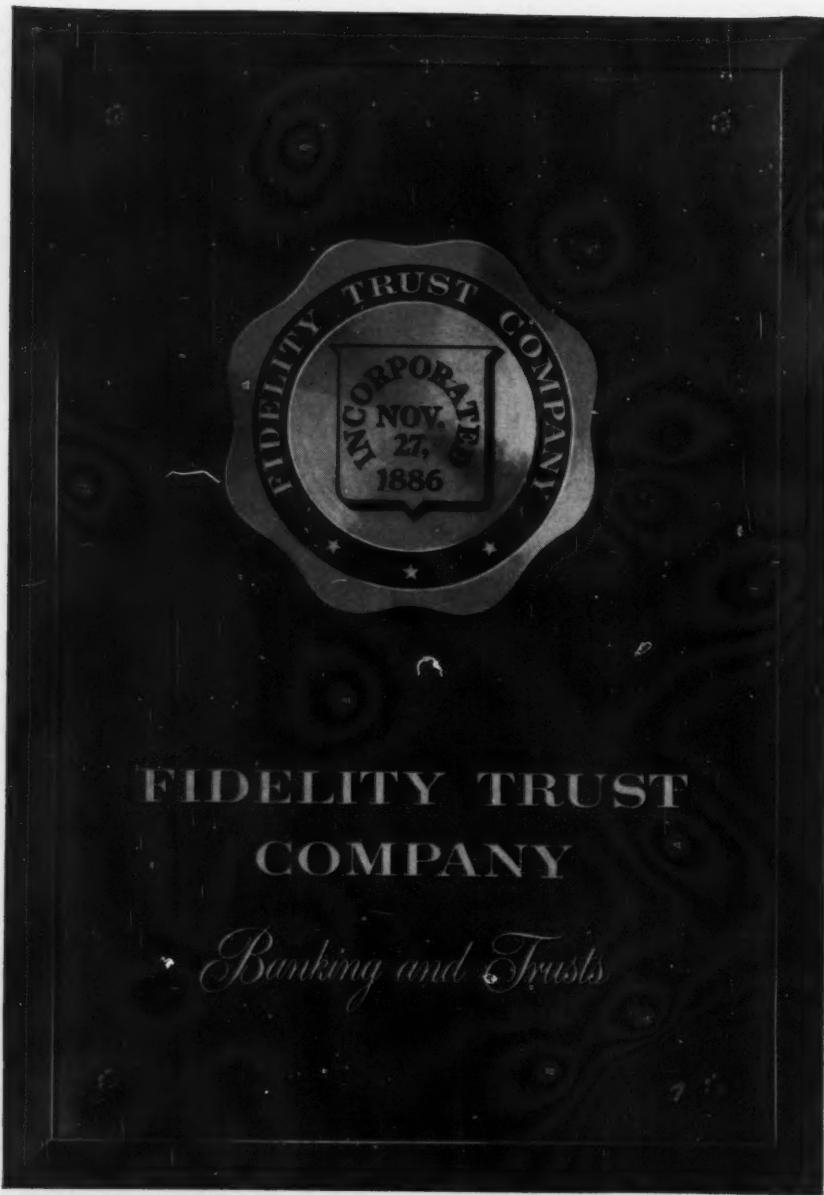
Some boundless contiguity of shade  
Where rumour of oppression and deceit,  
Or unsuccessful or successful war  
Might never reach me more.

It was part of the Greek legacy that medieval scholars disputed gracefully in cloisters. That the Greeks had cloisters of their own is as little known as the fact that these cloisters were called "stoas." How many of those who have heard of Stoic

philosophy realize it developed from discussions in the splendid shade of stoas.

The most important of these stoas was that built in Athens by King Pergamon of Attalos. He had been educated in Greece and wished to offer to others an extension of the privileges he had received. The story of this building and its resurrection by Americans was told to readers of *CARNEGIE MAGAZINE* last spring by Ralph E. Griswold. It is my intention here only to account for the stewardship exercised by my husband and me in representing the University of Pittsburgh and the Carnegie Library of Pittsburgh last autumn at the dedication ceremonies of King Pergamon's American-renewed gift. These ceremonies coincided with the seventy-fifth anniversary of the American School of Classical Studies in Athens.

We had elected to spend the first half of our vacation exploring that fascinating combination of Roman ruin and oriental wreckage which is today giving birth to the Federated



# FIDELITY TRUST COMPANY

*Banking and Trusts*

People's Republics of Yugoslavia. We therefore reached Athens by the Balkan Express, certainly also a relic of a once glorious past, but about which it is difficult to romanticize. Fortunately it arrives in the morning, so we had a whole spare day in which to pay tribute to the birthplace of democracy combined with city planning, a combination considered to be peculiarly American, but which actually began in Athens.

Everyone knows about the democracy, but few tourists seem to realize that Athens is today a modern planned city. Washington is a far older capital, for it was not until 1833 that the then insignificant village of Athens

Mrs. Gray is assistant head of the reference department at Carnegie Library of Pittsburgh and wife of Peter Gray, of the University of Pittsburgh, well known to TV audiences since his appearance on the \$64,000 Challenge. Mrs. Gray is a graduate of the University of London and taught in private girls' schools in Edinburgh before coming to this country in 1937. She has received master's degrees from Pitt and Carnegie Institute of Technology.

was selected as the seat of government of the newly resurrected Kingdom of the Hellenes. At that time there were certainly plenty of ruins about the district, but the less massive of these were overgrown with a rash of jerry-built houses, the inevitable concomitant of boom towns.

Today all is changing. The Parthenon, rebuilt with superb restraint, looks down on a city of broad avenues with only a few scattered patches of slums still clinging parasitically, all too often, to the monuments of antiquity.

Parasites often damage the host to which they cling, and their removal many times accentuates this damage. It is all the more to the credit of the American School of Classical Studies that, in a brief quarter century, they have not only cleansed the face of the old Agora of its parasitic slums, but have added new beauty to the scarred tissue. Much of this new beauty comes from the hands of Pittsburgh's famed landscape architect,



Photos by Peter Gray

THE GENNAIDIUS LIBRARY, SETTING FOR ONE OF THE RECEPTIONS AT THE DEDICATION

Mr. Griswold, who is restoring the flowers and trees of the classic era.

More immediately spectacular, however, is the newly restored Stoa of King Pergamon of Attalos. This, the prime reason for our visit to Athens, is not a restoration in the sense that heaps of rubble have been repiled into an approximation of their original shape. It is a true resurrection in the sense that skilled craftsmen have labored under the direction of dedicated scholars to recreate the whole structure in its pristine glory.

The scheme of the receptions and entertainments in which we became involved was designed to emphasize this achievement. The very proper introduction was in the garden of the Gennadius Library, where American scholars spoke modestly, and Greek scholars appreciatively, of what had been done.

But then in the evening the whole "glory that was Greece" was invoked for us in the Odeum of Herodes Atticus, where the Ministry of Education invited us to witness a performance of Euripides' *Medea*. Here was a magic conjured of art to be forever remembered. Several thousand of us sat spellbound on ancient stone benches listening to a two-thousand-year-old play. I have never before felt so strongly that I was part of a great cultural heritage stretching unbroken from the past into the future. There was in this feeling also pride that the evening was a tribute to a concrete contribution of America to this heritage.

The next day emphasized that this contribution was not unique. Corinth, the object of a daylong visit, also owes its present form to workers of the American School.

On Monday, September 3, all this culminated in the restoration to the Greek people of the Stoa of their ancestors. A long, low building of red tiles and marble columns, it stretches across the end of the old market exactly as when it was first built a century

and a half before the birth of Christ. The huge colonnaded walk will be used by modern philosophers just as it was by their ancestors. The King of the Hellenes and his lovely Queen accepted the gift on behalf of their people. And there it will stand, I hope for the next two thousand years, as a lasting tribute from a new people to an old.

## IMPERIAL WOMAN

[Continued from page 97]

through its crisis. If we cannot get courage easily from heaven, we get our strength from earth, from the brave people in history, from the brave mood in books.

That is surely what Pearl Buck meant to do. In the dissolving world that is our world, in a world where many things change and every strong thing seems to decay, she gives us a picture of a fearless woman. A child of her own time, this woman used all the decadent means of the corrupt palace as she was driven—first by ambition, then by protectiveness for her child, then by desire to maintain her country, and in the end by sheer heroic stubbornness—to live and to endure.

It is an interesting thing that Scripture, wanting to describe a grand woman, in the famous last chapter of the Book of Proverbs calls her "a woman of valor," that is, a woman of courage. She is described as being the strong one in her household, willing and able to carry the burdens and meet the crises. If we think of the Empress as the woman of valor, expand the household into an enormous empire, make the family problems a series of national crises in history, and make the world's future dark; give this woman the courage to endure and outlive—then you have a symbol of courage in every heart, in every land. All are strengthened by this picture of the last Empress of China, a queen of valor in a decadent world, an imperial woman.

## ALLEGHENY COUNTY BOOKMOBILE SCHEDULE

CARNEGIE LIBRARY OF PITTSBURGH

### MONDAY

1:30-3:00 P.M. Shopping Center on Forest Grove Road  
(KENNEDY TOWNSHIP)

3:45-8:45 P.M. Great Southern Shopping Center  
(BRIDGEVILLE)

### TUESDAY

1:15-3:15 P.M. Elizabeth Borough

4:00-8:45 P.M. Caste Village  
(WHITEHALL)

### WEDNESDAY

1:15-8:45 P.M. Miracle Mile Shopping Center  
(MONROEVILLE)

### THURSDAY

3:45-8:45 P.M. North Park Village Shopping Center  
(McKNIGHT ROAD IN ROSS TOWNSHIP)

### FRIDAY

1:30-4:15 P.M. Hampton Hardware & Supply Co.  
(NEXT TO HAMPTON SHOPPING CENTER)

4:45-8:45 P.M. Pines Plaza Shopping Center  
(ROUTE 19 IN ROSS TOWNSHIP)

### SATURDAY

11:30 A.M. Heights Plaza Shopping Center  
4:30 P.M. (NATRONA HEIGHTS)

## JOHN ARCHER COLLECTION

CARNEGIE LIBRARY is fortunate in having received the personal library of the late John Archer, who returned to Pittsburgh in 1951 upon his retirement as printer at the New York Public Library. The collection, devoted to all phases of the graphic arts, greatly enhances the value of the Library's resources in this field.

Carnegie Library was chosen to house the collection because John Archer as a young man gained his first experience in library printing at Carnegie from 1901 to 1910. He left to go to the New York Public Library and after a few years was made superintendent of the printing plant there. In New York he was active in all typographic activities, including the American Institute of Graphic Arts, the Grolier Club, and the Typophiles.

Mr. Archer's work at the New York Public Library gained for him a national reputation. Among publications done under his direction and chosen for typographic excellence to exhibit with the FIFTY BOOKS OF THE YEAR

were a first translation of Ptolemy's *Geography* into English in 1932 and a 1950 production of *Tobacco Is American*.

When John Archer retired in 1951, his many friends in the Typophiles gathered at the Grolier Club in his honor and presented as a token of friendship a beautifully designed and printed chap book, *Sagittarius*, dedicated to and devoted to John Archer, "Mr. Printer."

The collection at Carnegie Library, shelved in special cases in the Technology Department, consists of almost fifteen hundred pieces devoted to all phases of the graphic arts. It is John Archer's personal library and reflects the personal tastes of the collector—the mark of any sound collection. An interesting and amusing aspect of the collection is the number of examples of poor typography obviously selected by Mr. Archer with good humor.

Printing Management students at Carnegie Tech are making extensive use of this fine set of materials now available for study.

—HELEN BECKER

## BOARD OF TRUSTEES

The following thirty-six trustees serve both Carnegie Institute and Carnegie Institute of Technology, and eighteen of them (starred) are also trustees of Carnegie Library of Pittsburgh. Their committee memberships are indicated.

EDWARD DUFF BALKEN  
*Fine Arts.*

JAMES H. BEAL  
Reed, Smith, Shaw & McClay. *Fine Arts.*

FREDERICK G. BLACKBURN  
Vice President, Mellon National Bank and Trust Company. *Museum, Tech, Auditing, Advisory.*

WALTER J. BLENKO  
Blenko, Hoopes, Leonard & Buell. *Chairman, Executive Committee, Carnegie Institute of Technology; Finance.*

\*JAMES M. BOVARD  
President, Carnegie Library, Carnegie Institute; *Chairman of the Board, Carnegie Institute of Technology.*

\*ARTHUR E. BRAUN  
Advisory Committee, Mellon National Bank and Trust Company. *Buildings and Grounds.*

J. FREDERIC BYERS, JR.  
Chairman of the Board, A. M. Byers Co. *Fine Arts, Museum.*

\*SAMUEL B. CASEY  
Chairman of the Board, Swindell-Dressler Corporation. *Buildings and Grounds, Auditing.*

\*IRMA M. D'ASCENZO  
City Council. *Library.*

\*CHARLES F. DINAN  
City Council. *Pension.*

\*PATRICK T. FAGAN  
City Council. *Music Hall.*

BENJAMIN F. FAIRLESS  
Chairman, Executive Advisory Board, United States Steel Corporation. *Museum, Tech.*

\*THOMAS J. GALLAGHER  
President, City Council. *Buildings and Grounds.*

H. J. HEINZ II  
President, H. J. Heinz Company. *Fine Arts, Pension.*

\*JAMES F. HILLMAN  
President, Harmon Creek Coal Corporation. *Fine Arts, Library.*

\*J. GARFIELD HOUSTON  
President, Board of Public Education. *Library, Auditing.*

ROY A. HUNT  
Chairman, Executive Committee, Aluminum Company of America. *Fine Arts, Tech, Finance, Advisory.*

\*PAUL F. JONES  
City Council. *Museum.*

JOHN F. LABOON  
Executive Director and Chief Engineer, Allegheny County Sanitary Authority. *Tech, Music Hall.*

\*DAVID L. LAWRENCE  
Mayor of Pittsburgh. *Fine Arts.*

PARK H. MARTIN  
Executive Director, Allegheny Conference on Community Development. *Chairman, Special Building Committee.*

RICHARD K. MELLON  
Chairman of the Board, Mellon National Bank and Trust Company. *Museum, Advisory.*

LEONARD S. MUDGE  
Treasurer and Secretary, Stoner-Mudge, Inc. *Finance, Tech, Museum.*

\*WILLIAM R. OLIVER  
Assistant Treasurer, Jones & Laughlin Steel Corporation. *Fine Arts, Museum, Library.*

\*THOMAS L. ORR  
*Fine Arts, Tech, Finance, Advisory.*

\*GWILYNN A. PRICE  
Chairman of the Board and President, Westinghouse Electric Corporation. *Tech.*

JAMES C. REA  
*Museum, Music Hall, Pension, Finance.*

\*WILLIAM M. ROBINSON  
Reed, Smith, Shaw & McClay. *Finance.*

\*BENNETT RODGERS  
City Council. *Library, Museum.*

CHARLES J. ROSENBLUM  
President, Rosenblum Finance Corporation. *Fine Arts.*

SIDNEY A. SWENSRUD  
Chairman of the Board, Gulf Oil Corporation. *Tech.*

\*JOHN F. WALTON, JR.  
T. Mellon and Sons. *Buildings and Grounds, Museum.*

JOHN C. WARNER  
President, Carnegie Institute of Technology. *Tech, Fine Arts.*

\*FREDERIC G. WEIR  
City Council. *Buildings and Grounds, Tech.*

WILLIAM P. WITHEROW  
*Music Hall, Tech, Advisory.*

LAWRENCE C. WOODS, JR.  
Equitable Life Assurance Society of United States. *Advisory, Museum, Pension.*

### HONORARY TRUSTEE

A. L. WOLK

Judge of the Orphans' Court of Allegheny County.

en  
d.

egheny

Com-  
building

nk and

inance,

Corpora-

nghouse

ine Arts.

. Tech.

Museum.

. Tech.

d States.